

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 May 2004 (06.05.2004)

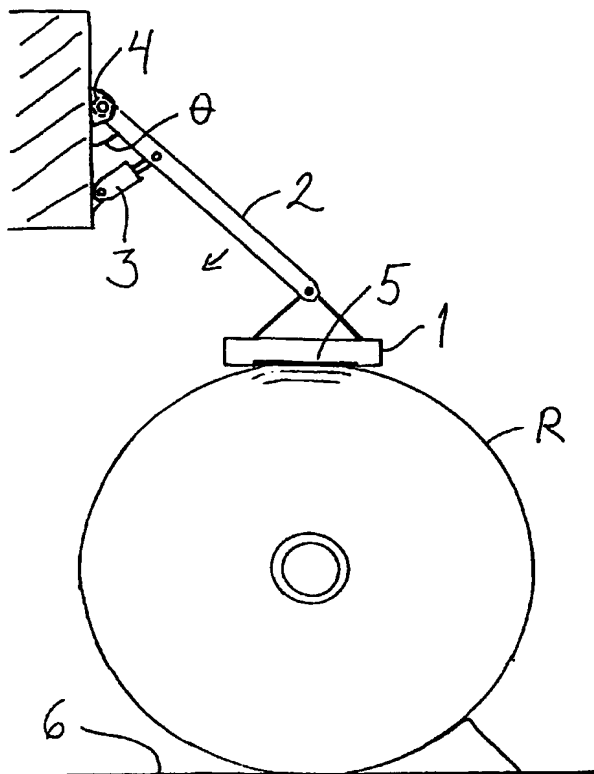
PCT

(10) International Publication Number  
**WO 2004/038384 A1**

- (51) International Patent Classification: **G01N 3/08**
- (21) International Application Number: **PCT/FI2003/000784**
- (22) International Filing Date: 22 October 2003 (22.10.2003)
- (25) Filing Language: Finnish
- (26) Publication Language: English
- (30) Priority Data:  
20021902 24 October 2002 (24.10.2002) FI
- (71) Applicant (for all designated States except US): **METSO PAPER, INC.** [FI/FI]; Fabianinkatu 9 A, FIN-00130 Helsinki (FI).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **JORKAMA, Marko** [FI/FI]; Jenkkapolku 30 A, FIN-04420 Järvenpää (FI).
- (74) Agent: **TAMPEREEN PATENTTITOIMISTO OY;** Hermiankatu 12 B, FIN-33720 Tampere (FI).
- (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

(54) Title: **METHOD FOR DETERMINING THE MODULUS OF ELASTICITY OF PAPER**



(57) Abstract: The invention relates to a method for determining the radial modulus of elasticity of paper or a corresponding web-like material that can be reeled or wound on a reel. In the method the connection between the force and deflection of a material arranged in layers is measured. The measurements of force and deflection necessary for calculating the radial modulus of elasticity are performed on a reel (R) of paper or corresponding material outside the reeling or winding position by loading the reel with a press member (1).